

I claim:

1. A method of determining the syntactic correctness of an expression for use in a computing environment, said method comprising the steps of:

- 5 (a) creating a string of characters from said expression;
- (b) iteratively substituting occurrences of said characters also occurring in a first predetermined list with characters from a second predetermined list; and
- (c) determining said expression to be syntactically correct only if said string reduces to a single predetermined character.

10 2. The method according to claim 1, whereby characters not permitted in said string are substituted with a special character from said second predetermined list that causes said iteration to be ceased.

15 3. The method according to claim 1, whereby characters not permitted in said string are substituted with a special character from said second predetermined list that causes said expression to be determined to be syntactically incorrect on completion of said iterative substitution step (b).

20 4. The method according to claim 1, whereby said expression is algebraic, and step (a) includes substituting each variable and variable operators with a single variable character, and retaining algebraic characters.

25 5. The method according to claim 1, whereby said expression is a filename, and step (a) includes substituting subdirectory names, filenames and filename extensions with a single character, and retaining delimiter characters.

30 6. The method according to claim 1, whereby said expression is a variable or function name, and step (a) includes substituting a number with one character, and substituting an alphabet or an underscore with a second character.

7. The method according to claim 1 comprising the further step, before step (a), of:

- 35 (d) defining said first predetermined list and said second predetermined list as arrays having one-to-one correspondence.

8. The method according to claim 7, whereby, step (d) includes the steps of:

(e) defining said first predetermined list such that its elements correspond to all possible correct and incorrect combinations of characters; and

(f) defining said second predetermined list such that it has one single character in the corresponding location for all correct combinations in said first array, and another single character in the corresponding location for all incorrect combinations in said first array.

9. A computer readable memory medium for storing a program for apparatus which determines the syntactic correctness of an expression for use in a computing environment, said program comprising:

code for a creation step for creating a string of characters from said expression;

code for a substitution step for iteratively substituting occurrences of said characters also occurring in a first predetermined list with characters from a second predetermined list; and

code for a determination step for determining said expression to be syntactically correct only if said string reduces to a single predetermined character.

10. The computer readable memory medium according to claim 9, whereby characters not permitted in said string are substituted with a special character from said, second predetermined list that causes said iteration to be ceased.

11. The computer readable memory medium according to claim 9, whereby characters not permitted in said string are substituted with a special character from said second predetermined list that causes said expression to be determined to be syntactically incorrect on completion of said iterative substitution step.

12. The computer readable memory medium according to claim 9, whereby said expression is algebraic, and said creation step includes substituting each variable and variable operators with a single variable character, and retaining algebraic characters.

13. The computer readable memory medium according to claim 9, whereby said expression is a filename, and said creation step includes substituting subdirectory

names, filenames and filename extensions with a single character, and retaining delimiter characters.

14. The computer readable memory medium according to claim 9, whereby
5 said expression is a variable or function name, and creation step includes substituting a number with one character, and substituting an alphabet or an underscore with a second character.

15. The computer readable memory medium according to claim 9 further
10 comprising:

code for a definition step for defining said first predetermined list and said
second predetermined list as arrays having one-to-one correspondence.

16. The computer readable memory medium according to claim 15, wherein
15 said code for said definition step comprises:

code for a first definition step for said first predetermined list such that its
elements correspond to all possible correct and incorrect combinations of characters; and

code for a second definition step for defining said second predetermined list such
that it has one single character in the corresponding location for all correct combinations
20 in said first array, and another single character in the corresponding location for all
incorrect combinations in said first array.

09/27/96 12:01:00